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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Cherala et al.

App. No.: 10/687,562 GPAU: 1763

Filing Date: 10/16/2003 Examiner: (unassigned)

Dkt. No.: PA61-03-03 Conf. No.: 7154

For: APPLYING IMPRINTING MATERIAL TO SUBSTRATES EMPLOYING  
ELECTROMAGNETIC FIELDS

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INFORMATION DISCLOSURE STATEMENT

Mail Stop AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The following information is submitted in compliance with Applicants' duty of disclosure and pursuant to 37 C.F.R. § 1.56, § 1.97 and § 1.98. The undersigned brings the patents, publications, applications or other information identified in the attached:

☒ Form(s) PTO/SB/08A and/or PTO/SB/08B or PTO/1449

☐ Other:

to the Examiner's attention in the above-identified application. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

This Information Disclosure Statement is being filed:

before the mailing date of a first Office action on the merits or before the mailing date of a first Office action after the filing of a request for continued examination under § 1.114. Therefore, no fee is believed required.

Applicants do not believe that any additional fees are due, but if the Commissioner believes additional fees are due, the

Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 502650.

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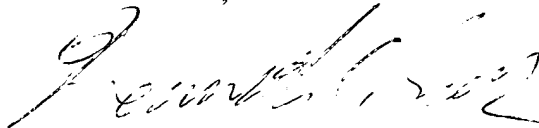
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as either First Class Mail or Express Mail, in an envelope addressed to the Commissioner for Patents.

Signed: Katrina Prati

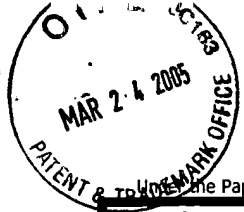
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Date: 3-22-05

Respectfully Submitted,



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PTO/SB/08A (08-03)

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT***(use as many sheets as necessary)*

Sheet 1 of 6

**Complete if Known**

APPLICATION NUMBER	10/687,562
FILING DATE	10/16/2003
FIRST NAMED INVENTOR	Cherala et al.
Group Art Unit	1763
Examiner Name	Unassigned
Attorney Docket Number	PA61-03-03

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	C1	4,731,155		Napoli et al.	3/15/1988	
	C2	6,391,217	B2	Schaffer et al.	5/21/2002	
	C3	6,517,977	B2	Resnick et al.	2/11/2003	
	C4	6,696,220	B2	Bailey et al.	2/24/2004	
	C5	2002/0177319	A1	Chou	11/28/2002	
	C6	4,119,688		Hiraoka	10/10/1978	
	C7	6,646,662	B1	Nebashi et al.	11/11/2003	
	C8	6,776,094	B1	Whitesides et al.	8/17/2004	
	C9	5,670,415		Rust	9/23/1997	
	C10	5,855,686		Rust	1/5/1999	
	C11	6,518,189	B1	Chou	2/11/2003	
	C12	2002/0132482	A1	Chou	9/19/2002	
	C13	2002/0167117	A1	Chou	11/14/2002	
	C14	6,482,742	B1	Chou	11/19/2002	
	C15	2003/0080471	A1	Chou	5/1/2003	
	C16	2004/0036201	A1	Chou et al.	2/26/2004	
	C17	2004/0192041	A1	Jeong et al.	9/30/2004	
	C18	6,828,244	B2	Chou	12/7/2004	

Examiner  
SignatureDate  
Considered

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Sheet	2	of	6		

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	C19	6,809,356	B2	Chou	10/26/2004	
	C20	2004/0197843	A1	Chou et al.	10/7/2004	
	C21	2004/0156108	A1	Chou et al.	8/12/2004	
	C22	2004/0137734	A1	Chou et al.	7/15/2004	
	C23	2004/0131718	A1	Chou et al.	7/8/2004	
	C24	2004/0118809	A1	Chou et al.	6/24/2004	
	C25	2004/0046288	A1	Chou	3/11/2004	
	C26	2003/0080472	A1	Chou	5/1/2003	
	C27	2003/0034329	A1	Chou	2/20/2003	
	C28	2002/0042027	A1	Chou et al.	4/11/2002	
	C29	2004/0200411	A1	Willson et al.	10/14/2004	
	C30	6,580,172	B2	Mancini et al.	6/17/2003	
	C31	10/923,629		Sreenivasan et al.	8/20/2004	
	C32	4,512,848		Deckman et al.	4/23/1985	
	C33	6,517,995	B1	Jacobenson et al.	2/11/2003	
	C34	2004/0110856	A1	Young et al.	6/10/2004	
	C35	5,028,366		Harakal et al.	7/2/1991	
	C36	5,601,641		Stephens	2/11/1997	

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				<b>Group Art Unit</b>	1763
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	C37	5,849,209		Kindt-Larsen et al.	12/15/1998	
	C38	5,849,222		Jen et al.	12/15/1998	

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		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				

	C39	WO	2004/016406		Sreenivasan	2/26/2004		
	C40	WO	00/21689		Chou et al.	4/20/2000		
	C41	JP	02-92603		Kurikawa et al.	4/3/1990		
	C42	JP	02-24848		Kamio	1/26/1990		
	C43	WO	01/47003		Steiner et al.	6/28/2001		
	C44	WO	02/07199		Chou	1/24/2002		
	C45	WO	2004/114016		Chou et al.	12/29/2004		
	C46	WO	99/05724		Chou et al.	2/4/1999		
	C47	WO	03/010289		Chou et al.	2/6/2003		
	C48	WO	03/079416		Chou	9/25/2003		
	C49	WO	03/099536		Chou et al.	12/4/2003		
	C50	WO	2004/013693		Watts et al.	2/12/2004		

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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>

	C51	Chou, Nanoimprint Lithography and Lithographically Induced Self-Assembly, MRS Bulletin, pp. 512 - 517, 7/1/2001	
	C52	Choi et al., Design of Orientation Stages for Step and Flash Imprint Lithography, Precision Engineering, pp. 192 - 199, 1/1/2001	
	C53	Colburn et al., Step and Flash Imprint Lithography for sub-100 nm Patterning, Proceedings of SPIE Vol. 3997, pp. 453 - 457, 1/1/2000	
	C54	Chou et al., Imprint Lithography with Sub-10 nm Feature Size and High Throughput, Microelectronic Engineering 35, pp. 237 - 240, 1/1/1997	
	C55	Haisma et al., Mold-assisted Nanolithography: A Process for Reliable Pattern Replication, J. Vac. Sci. Technol. B, pp 4124 - 4128, 11/1/1996	
	C56	Johnson et al., Advances in Step and Flash Imprint Lithography, SPIE Microlithography Conference, 2/23/2003	
	C57	Colburn et al., Step and Flash Imprint Lithography: A New Approach to High-Resolution Patterning, Proc. Of SPIE, vol. 3676, 3/1/1999	
	C58	Heidari, Nanoimprint Lithography at the 6 in. Wafer Scale, J. Vac. Sci. Technol. B 18(6), pp. 3557 - 3560, 11/1/2000	
	C59	Translation of Japanese Patent 02-92603	

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	C60	Translation of Japanese Patent 02-24848	
	C61	Chou et al., Ultrafast and Direct Imprint of Nanostructures in Silicon, Nature, Col. 417, (June 2002), pp. 835-837, 6/1/2002	
	C62	Chou et al., Nanoimprint Lithography, Journal of Vacuum Science Technolgy B 14(16), pp. 4129-4133, 11/1/1996	
	C63	Colburn et al., Development and Advantages of Step-and-Flash Lithography, Solid State Technology, 7/1/2001	
	C64	Colburn et al., Characterization and Modeling of Volumetric and Mechanical Properties for Step and Flash Imprint Lithography Photopolymers, Journal of Vacuum Science Technology. Vol b. 19(6), 11/1/2001	
	C65	Bailey et al., Step and Flash Imprint Lithography: Defect Analysis, Journal of Vacuum Science, B 19(6), pp. 2806-2810, 11/1/2001	
	C66	Bailey et al., Step and Flash Imprint Lithography: Template Surface Treatment and Defect Analysis, Journal of Vacuum Science, B 18(6), pp. 3572-3577, 11/1/2000	
	C67	Schneider et al., Stripes of Partially Fluorinated Alkyl Chains: Dipolar Langmuir Monolayers	

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